

# TENT COOPERATION TRE Y

From the INTERNATIONAL BUREAU

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Assistant Commissioner for Patents  
United States Patent and Trademark  
Office  
Box PCT  
Washington, D.C.20231  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

<b>Date of mailing</b> (day/month/year) 04 May 2000 (04.05.00)	
<b>International application No.</b> PCT/US99/17132	<b>Applicant's or agent's file reference</b> PF-0565 PCT
<b>International filing date</b> (day/month/year) 28 July 1999 (28.07.99)	<b>Priority date</b> (day/month/year) 28 July 1998 (28.07.98)
<b>Applicant</b> HILLMAN, Jennifer, L. et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

02 February 2000 (02.02.00)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<p>The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No.: (41-22) 740.14.35</p>	<p>Authorized officer C. Villet</p> <p>Telephone No.: (41-22) 338.83.38</p>
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091744794.

## PCT COOPERATION TREA

PCT

NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

From the INTERNATIONAL BUREAU

To:

BILLINGS, Lucy, J.  
Incyte Pharmaceuticals, Inc.  
3174 Porter Drive  
Palo Alto, CA 94304  
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year) 02 March 2001 (02.03.01)	
Applicant's or agent's file reference PF-0565 PCT	<b>IMPORTANT NOTIFICATION</b>
International application No. PCT/US99/17132	International filing date (day/month/year) 28 July 1999 (28.07.99)
International publication date (day/month/year) 10 February 2000 (10.02.00)	Priority date (day/month/year) 28 July 1998 (28.07.98)
Applicant INCYTE PHARMACEUTICALS, INC. et al	

1. The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
2. This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
3. An **asterisk(\*)** appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
4. The **letters "NR"** appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
14 Sept 1998 (14.09.98)	60/155,196	US	19 Marc 2000 (19.03.00)
14 Octo 1998 (14.10.98)	60/155,239	US	19 Marc 2000 (19.03.00)
03 Nove 1998 (03.11.98)	60/106,889	US	20 Sept 1999 (20.09.99)
19 Nove 1998 (19.11.98)	60/109,093	US	20 Sept 1999 (20.09.99)
22 Dece 1998 (22.12.98)	60/113,796	US	20 Sept 1999 (20.09.99)
12 Janu 1999 (12.01.99)	60/155,233	US	29 Febr 2000 (29.02.00)

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Beate Giffo-Schmitt

Facsimile No. (41-22) 740.14.35

Telephone No. (41-22) 338.83.38

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>PF-0565 PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No <b>PCT/US 99/ 17132</b>	International filing date (day/month/year) <b>28/07/1999</b>	(Earliest) Priority Date (day/month/year) <b>28/07/1998</b>
Applicant  <b>INCYTE PHARMACEUTICALS, INC. et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 8 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

### 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☒ contained in the international application in written form.

☒ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☒ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 99/ 17132

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
Remark: Although claim 19  
is directed to a method of treatment of the human/animal  
body, the search has been carried out and based on the alleged  
effects of the compound/composition.
2. ☒ Claims Nos.: 17, 18, 20  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such  
an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheets

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all  
searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment  
of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report  
covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is  
restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-20 partially

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

1. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to Protein Kinases; especially SEQIDs 1,12 and 32,43; the recombinant expression of the same and uses thereof.

2. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to PKC-potentiated inhibitory protein of PP1; especially SEQIDs 2 and 33; the recombinant expression of the same and uses thereof.

3. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to STE20-like Protein Kinases; especially SEQIDs 3 and 34; the recombinant expression of the same and uses thereof.

4. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to Phosphofructokinases; especially SEQIDs 4 and 35; the recombinant expression of the same and uses thereof.

5. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to Serin/Threonine Protein Kinases; especially SEQIDs 5,6,10 and 36,37,41; the recombinant expression of the same and uses thereof.

6. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to Phosphatidylinositol-3-kinases; especially SEQIDs 7 and 38; the recombinant expression of the same and uses thereof.

7. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to Tyrosine or Tyrosine/serine Protein Kinases; especially SEQIDs 8,13,21 and 39,44,52; the recombinant expression of the same and uses thereof.

8. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

to Calcium /Calmodulin dependent Protein Kinases; especially SEQIDs 9,18,23,25 and 40,49,54,56; the recombinant expression of the same and uses thereof.

## 9. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to Tyrosine Phosphatases or Dual specificity phosphatases; especially SEQIDs 11,29,30 and 42,60,61; the recombinant expression of the same and uses thereof.

## 10. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to PEST phosphatase interacting protein; especially SEQIDs 14 and 45; the recombinant expression of the same and uses thereof.

## 11. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to SH3-binding proteins; especially SEQIDs 15 and 46; the recombinant expression of the same and uses thereof.

## 12. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to NIK-kinases; especially SEQIDs 16 and 47; the recombinant expression of the same and uses thereof.

## 13. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to Interferon-induced PK regulators; especially SEQIDs 17 and 48; the recombinant expression of the same and uses thereof.

## 14. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to Choline-kinases; especially SEQIDs 19 and 50; the recombinant expression of the same and uses thereof.

## 15. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to MAP-related Protein kinases; especially SEQIDs 20 and 51; the recombinant expression of the same and uses thereof.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

16. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to Ribosomal S6 Protein kinases; especially SEQIDs 22 and 53; the recombinant expression of the same and uses thereof.

17. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to Protein kinases Dyrk2; especially SEQIDs 24 and 55; the recombinant expression of the same and uses thereof.

18. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to Protein Phosphatases 2A; especially SEQIDs 26,28,31 and 57,59,62; the recombinant expression of the same and uses thereof.

19. Claims: 1-20 partially

Polynucleotide and polypeptide sequences that show homology to MAP-kinase Phosphatases; especially SEQIDs 27 and 58; the recombinant expression of the same and uses thereof.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 17,18,20

Claims 17,18 and in part 20 refer to an antagonist and agonist of the polypeptides without giving a true technical characterization. Moreover, no such compounds are defined in the application. In consequence, the scope of said claims is ambiguous and vague, and their subject-matter is not sufficiently disclosed and supported (Art. 5 and 6 PCT). No search can be carried out for such purely speculative claims whose wording is, in fact, a mere recitation of the results to be achieved.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 99/17132

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C07K14/47 C12N9/12 C12N5/10 C07K16/18  
A61K38/17

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	HILLIER, L., ET AL.: "WashU-NCI human EST project" EMBL SEQUENCE DATA LIBRARY, 6 February 1998 (1998-02-06), XP002121148 heidelberg, germany accession no. AA780791 ---	5,6,10, 11
X	ISHIKAWA, K., ET AL.: "prediction of the coding sequences of unidentified human genes. X. The complete sequences of 100 new cDNA clones from brain which can code for large proteins in vitro" DNA RESEARCH, vol. 5, no. 3, 30 June 1998 (1998-06-30), pages 169-176, XP002121149 the whole document --- -/--	1-5,9,10

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

9 November 1999

Date of mailing of the international search report

17. 02. 00

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Holtorf, S

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 99/17132

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 98 11234 A (HAWKINS PHILLIP R ; INCYTE PHARMA INC (US); AU YOUNG JANICE (US); G) 19 March 1998 (1998-03-19) the whole document ---	1-19
A	WO 97 02347 A (INCYTE PHARMA INC) 23 January 1997 (1997-01-23) the whole document ---	1-19
A	WALDEN, P.D. AND COWAN, N.J.: "a novel 205-kilodalton testis-specific serine/threonine protein kinase associated with microtubules of the spermatid manchette" MOLECULAR AND CELLULAR BIOLOGY, vol. 13, 1993, pages 7625-7635, XP002121150 the whole document ---	1-19
A	NAGASE, T., ET AL.: "prediction of the coding sequences of unidentified human genes. IX. The complete sequences of 100 new cDNA clones from brain which can code for large proteins in vitro" DNA RESEARCH, vol. 5, 1998, pages 31-39, XP002121152 especially Table 2 + 3 the whole document ---	1-19
A	HILLIER, L., ET AL.: "the WashU-Merck EST project" EMBL SEQUENCE DATA LIBRARY, 25 March 1995 (1995-03-25), XP002121151 heidelberg, germany accession no. t77135 ---	1-19
A	WO 97 48802 A (HAWKINS PHILLIP R ; INCYTE PHARMA INC (US); AU YOUNG JANICE (US); H) 24 December 1997 (1997-12-24) the whole document ---	1-19
P,X	WO 99 04265 A (SAHIN UGUR ; TURECI OZLEM (DE); PFREUNDSCHUH MICHAEL (DE); GOUT IVA) 28 January 1999 (1999-01-28) pages 1-7, 537, 578, 709 claims claims 1-117 -----	1-7, 9-16, 19

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 99/17132

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9811234	A	19-03-1998	US 5773699 A	30-06-1998
			US 5863780 A	26-01-1999
			AU 4261197 A	02-04-1998
			EP 0927257 A	07-07-1999
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WO 9702347	A	23-01-1997	AU 6405996 A	05-02-1997
			CA 2198729 A	23-01-1997
			EP 0781336 A	02-07-1997
			JP 10505510 T	02-06-1998
			US 5846778 A	08-12-1998
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WO 9748802	A	24-12-1997	US 5648239 A	15-07-1997
			AU 3401497 A	07-01-1998
			EP 0910639 A	28-04-1999
			US 5922844 A	13-07-1999
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WO 9904265	A	28-01-1999	AU 8571598 A	10-02-1999
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# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 10 SEP 2001

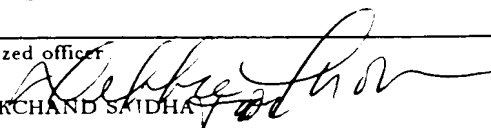
WIPO

Applicant's or agent's file reference PF-0565 PCT	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US99/17132	International filing date (day/month/year) 28 JULY 1999	Priority date (day/month/year) 28 JULY 1998
International Patent Classification (IPC) or national classification and IPC Please See Supplemental Sheet.		
Applicant INCYTE PHARMACEUTICALS, INC.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets.  
☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  
 These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  02 FEBRUARY 2000	Date of completion of this report  09 JULY 2001
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer  TERCHAND SAITHA
Facsimile No. (703) 305-3230	Telephone No. (703) 308-0196

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US99/17132

## I. Basis of the report

1. With regard to the **elements** of the international application:\*☒ the international application as originally filed☒ the description:

pages 1-74 , as originally filed  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_

☒ the claims:

pages 75-76 , as originally filed  
pages NONE , as amended (together with any statement) under Article 19  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_

☒ the drawings:

pages NONE , as originally filed  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_

☒ the sequence listing part of the description:

pages NONE , as originally filed  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:☒ contained in the international application in printed form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. ☒ The amendments have resulted in the cancellation of:☒ the description, pages NONE☒ the claims, Nos. NONE☒ the drawings, sheets/fig NONE5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\*Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US99/17152

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been and will not be examined in respect of:

☐ the entire international application.

☒ claims Nos. 17-20

because:

☐ the said international application, or the said claim Nos. \_ relate to the following subject matter which does not require international preliminary examination (*specify*).

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_ are so unclear that no meaningful opinion could be formed (*specify*).

☐ the claims, or said claims Nos. \_ are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 17-20.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US99/17132

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. statement**

Novelty (N)

Claims 12-16 YESClaims 1-11 NO

Inventive Step (IS)

Claims NONE YESClaims 1-16 NO

Industrial Applicability (IA)

Claims 1-16 YESClaims NONE NO**2. citations and explanations (Rule 70.7)**

Claims 1-11 lack novelty under PCT Article 33(2) as being anticipated by Ishikawa et al. [DNA Research (30 June 1998), Vol. 5, No. 3, pages 169-176]. Claims 1-11 recite or depends from claims reciting the limitation or phrase "and fragment thereof" referring to isolated polypeptide or polynucleotide. Claim 11 also recites "a sequence which is complementary to the polynucleotide...". There is no limitation present in the claims which would restrict the size or activity of the claimed polypeptide/polynucleotide fragments or complementary sequences. Di- and tri- nucleotides are well known in the art of molecular biology and chemistry and are encompassed by the scope of these claims. Therefore, the claims are anticipated by the reference.

Claims 12-16 lack an inventive step under PCT Article 33(3) as being obvious over Ishikawa et al. [DNA Research (June 30, 1998), Vol. 5, No. 3, pages 169-176]. With the fragments of the specific sequences disclosed in the works of Ishikawa et al., it would have been obvious for a person of ordinary skill to express the polynucleotide fragments into suitable host cells using vectors in order to recombinantly produce the protein, or develop hybridization protocol for polynucleotide detection, or develop antibodies by injecting the protein into rabbit or combine the protein with a suitable carrier for a pharmaceutical compositions.

Claims 1-16 have industrial applicability under PCT article 33(4), because the subject matter claimed can be made or used in industry.

\_\_\_\_ NEW CITATIONS \_\_\_\_\_

NONE

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US99/17182

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

**CLASSIFICATION:**

The International Patent Classification (IPC) and/or the National classification are as listed below:

IPC(7): A61K 38/00; C12/Q 1/68; C12P 21/06; C12N 1/20, 15/00; C07H 21/04; C07K 16/00 and US Cl.: 514/12; 435/6, 69.1, 252.3, 320.1; 536/23.1; 530/387.1



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification <sup>7</sup> : <b>C12N 15/12, C07K 14/47, C12N 9/12, 5/10, C07K 16/18, A61K 38/17</b></p>	<b>A2</b>	<p>(11) International Publication Number: <b>WO 00/06728</b></p> <p>(43) International Publication Date: 10 February 2000 (10.02.00)</p>																																																																																		
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